



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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16 OCT C3-K
Job Sheet 181833



Part No: C3-K

Job Qty: 1 ea

Part Name: C-Series Remote Hook 3,000 lbs Lift Capacity - Keeperless



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 8/9/18

Job Tracking No:

Due Date: 9/14/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG C3-K Rev 3 IPP Rev A 18.03.16 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	9/14/18	9/14/18	0.00	0.00	Start Up Small Fab-4		
100	Small Fab	1 pcs	9/14/18	9/14/18	0.00	1.00	Small Fab-3		
110	QC	1 pcs	9/14/18	9/14/18	0.00	0.00	QC5		
120	DC	1 pcs	9/14/18	9/14/18	0.00	0.00	DC		
130	Packaging	1 pcs	9/14/18	9/14/18	0.00	0.00	Packaging3-2		
140	QC21-SA	1 Ea	9/14/18	9/14/18	0.00	0.00	QC21		

Part Op 100 - 1- PICK C3-2-1 AND LASER ENGRAVE AS PER DWG . SEE NOTE 3 AND 4 ON SHEET 2. 2- ASSEMBLE AS
Descriptions: PER DWG

120 - Photocopy blue file OM & OOPM-C3 Rev 4

130 - Identify and Stock

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
188-FPSS-1032-1/4	Set Screw	2 Ea (2 ea)	90-Start up Operation	505876450
188-FSCS-832-5/8	Clock Spring Cover Screw	4 Ea (4 ea)	90-Start up Operation	5038399
2595K22	Heat Shrink Tube	1 pcs (1 ea)	100-Small Fab	5073047
32446	Crimp Terminal	2 Ea (2 ea)	100-Small Fab	5089146
8183K6	Wire Guide/Grip	1 Ea (1 ea)	100-Small Fab	5073059
AN4-16A	Bolt	3 Ea (3 ea)	100-Small Fab	5099494
AN4-17A	Bolt	1 Ea (1 ea)	100-Small Fab	5089027
AN6-15A	Bolt	1 Ea (1 ea)	100-Small Fab	5076004
AN960-10X	Washer	1 Ea (1 ea)	100-Small Fab	5075330
AN960-10LX	Washer, #10	2 Ea (2 ea)	100-Small Fab	5103666
AN960-416X	Flat Washer Dia 1/4"	8 Ea (8 ea)	100-Small Fab	5078780
AN960-616L	5/8" OD, THIN FLAT WASHER see NAS1149F0632P	2 Ea (2 ea)	100-Small Fab	5048299
C2-1-1	Manual Release Knob	1 Ea (1 ea)	100-Small Fab	50180195
C2-10-1	Lock Spring Pin	1 pcs (1 ea)	100-Small Fab	5068051
C2-11-2	Locating Pin	2 Ea (2 ea)	100-Small Fab	5058757
C2-3-1	Latch Shaft Du Bearing	2 pcs (2 ea)	100-Small Fab	5093406
C2-3-10	Latch Shaft	1 Ea (1 ea)	100-Small Fab	5046764
C2-3-11	Actuator	1 pcs (1 ea)	100-Small Fab	5075123
C2-3-2 P	Latch Roller Pin	1 Ea (1 ea)	100-Small Fab	5029246
C2-3-2-1	Roller Pin Retaining Ring	2 Ea (2 ea)	100-Small Fab	5056845
C2-3-3	Latch Roller	1 Ea (1 ea)	100-Small Fab	5068693

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

C2-3-3-1	Latch Roller DU Bearing	1 Ea (1 ea)	100-Small Fab	SO96109
C2-3-5	Spacer, Teflon	2 Ea (2 ea)	100-Small Fab	SO58758
C2-3-6	Latch	1 Ea (1 ea)	100-Small Fab	SO83629
C2-3-8	Actuator Shaft Bushing	2 Ea (2 ea)	100-Small Fab	SO79664
C2-5-1	Actuator Stop	1 Ea (1 ea)	100-Small Fab	SO58759
C3-10-2	Lock Spring	1 Ea (1 ea)	100-Small Fab	SO98948
C3-11-1	Side Plate - Solenoid C3-Hook	1 Ea (1 ea)	100-Small Fab	SO79472
C3-12-1	Lock Bushing	2 Ea (2 ea)	100-Small Fab	SO94891
C3-12-2	Lock Shaft - C3 Hook	1 Ea (1 ea)	100-Small Fab	SO79009
C3-12-3	Lock - C3 Hook	1 Ea (1 ea)	100-Small Fab	SO29266
C3-12-4	Lock Roller	1 Ea (1 ea)	100-Small Fab	SO100620
C3-12-5	Lock Roller Pin	1 Ea (1 ea)	100-Small Fab	SO100174
C3-12-6	Lock Roller Pin Circlip	2 Ea (2 ea)	100-Small Fab	SO73407
C3-13-1	Keeper Bushing	2 pcs (2 ea)	100-Small Fab	SO29270
C3-13-4-2 P	Keeperless Adapter	1 Ea (1 ea)	100-Small Fab	SO29272
C3-2-1	Side Plate C-3 Hook	1 Ea (1 ea)	100-Small Fab	SO77290
C3-3-4	Link Pin	2 Ea (2 ea)	100-Small Fab	SO94866
C3-3-4-1	Ring, Retaining	4 pcs (4 ea)	100-Small Fab	SO104709
C3-3-7	Link	1 Ea (1 ea)	100-Small Fab	SO48390
C3-3-9 P	Actuator Spring	1 pcs (1 ea)	100-Small Fab	SO29280
C3-4-1	Load Beam Bushing	2 Ea (2 ea)	100-Small Fab	SO99320
C3-4-4KA	Keeperless Load Beam Assembly - C3 Hook	1 Ea (1 ea)	100-Small Fab	SO97897
C3-7-1	Load Beam Bumper	1 Ea (1 ea)	100-Small Fab	SO100147
C3-7-2	Lock Bumper	2 Ea (2 ea)	100-Small Fab	SO103777
C3-8-2	Solenoid	1 Ea (1 ea)	100-Small Fab	SO8110258
C3-8-4	Solenoid Cover Gasket	1 Ea (1 ea)	100-Small Fab	SO79732
C3-8-5 P	Solenoid Cover	1 Ea (1 ea)	100-Small Fab	SO100111
C3-9-1- P	Clock Spring Cover - C3 Hook	1 Ea (1 ea)	100-Small Fab	SO29289
C3-9-2	Spring, Clock	1 pcs (1 ea)	100-Small Fab	SO89524
EL-PLUG-M	3-Prong Male Spade Plug	1 Ea (1 ea)	100-Small Fab	SO66781
M27500-16TG2T14	Wire - 16-Gauge - Shielded	1 ft (1 ea)	100-Small Fab	SO100111 75194
MS21044N4	Nut, Self-Locking	4 Ea (4 ea)	100-Small Fab	SO100111 92510
MS21083-N3	Nut	2 Ea (2 ea)	100-Small Fab	SO76011
MS21083N6	Nut	1 Ea (1 ea)	100-Small Fab	SO76012
MS35266-63	Solenoid Cover Screw	1 Ea (1 ea)	100-Small Fab	SO38767

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	188-FPSS-1032-1/4	2	117	0
100-Small Fab	DART AEROSPACE Container No: S109846  Part: C3 - K Job No: 181833 Serial No/Batch: S109846 Revision: 3 Inspector: Exp Date: Instructions:	1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL: 1 813 632-5200 Email: sales@dartaero.com www.dartaerospace.com	34	0
	C2-3-3	1	9	0
	C2-3-3-1	1	22	0
	C2-3-5	2	42	0
	C2-3-6	1	17	0
	C2-3-8	2	40	0
	C2-5-1	1	34	0
	C3-10-2	1	22	0
	C3-11-1	1	16	0

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

C3-12-1	2	35	0
C3-12-2	1	40	0
C3-12-3	1	2	0
C3-12-4	1	40	0
C3-12-5	1	20	0
C3-12-6	2	87	0
C3-13-1	2	44	0
C3-13-4-2	1	0	0
C3-2-1	1	15	0
C3-3-4	2	38	0
C3-3-4-1	4	132	0
C3-3-7	1	40	0
C3-3-9	1	47	0
C3-4-1	2	46	0
C3-4-4KA	1	5	0
C3-7-1	1	17	0
C3-7-2	2	2	0
C3-8-2	1	3	0
C3-8-4	1	11	0
C3-8-5	1	18	0
C3-9-1	1	0	0
C3-9-2	1	52	0
EL-PLUG-M	1	122	0
M27500-16TG2T14	1	93	0
MS21044N4	4	128	0
MS21083-N3	2	90	0
MS21083N6	1	157	0
MS35266-63	1	55	0

Part Specifications

Specifications could not be found.

Plex 8/9/18 1:39 PM Dart.lajeunesse.marie

Grease Aeroshell

m/138724

Loctite 648

m/138933

SAF-t-eze anti-seize m/128063.

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



Remote Cargo Hook Test Form

C3

MAKE SURE YOU ARE USING THE CORRECT TEST FORM FOR THE CORRECT SOLENOID!

NEW SOLENOID (152951-001)

Work Order 181833

Customer _____

Serial Number S109846

Date 20/09/18

# of Releases	Load (Lbs.)	Release Method	Remarks	Result	Pass/Fail
1	7,500	Static Hold	Hold for two minutes and reduce load to zero	N/A	Pass
10	1,500	Electircal, 25 volts	No "hang ups" permitted	N/A	Pass
2	3,000	Electircal, 22 volts	Current shall not exceed 12.8 A 8.9	A	Pass
2	2,500	Electircal, 22 volts	Current shall not exceed 12.8 A 8.9	A	Pass
2	2,000	Electircal, 22 volts	Current shall not exceed 12.8 A 8.6	A	Pass
2	1,500	Electircal, 22 volts	Current shall not exceed 12.8 A 8.6	A	Pass
2	500	Electircal, 22 volts	Current shall not exceed 12.8 A 8.6	A	Pass
1	3,000	Electircal, 20 volts	Current shall not exceed 11.6 A 8.0	A	Pass
1	3,000	Electircal, 28 volts	Current shall not exceed 16.2 A 11.0	A	Pass
1	3,000	Manual		N/A	
1	3,000	Impact Test	Impact shackle 10x , shall not release	N/A	
1	N/A	Solenoid Ohms	Shall not exceed 1.7-2.0 Ω	Ω	
1	N/A	Electircal Continuity	Across both wires	N/A	

Test Conducted By:

Francis Laetrix

Technician

Submit

Signature:

Sylvie Pouchon
QC 5 Small FAB / QA